

**Federal Defenders
OF NEW YORK, INC.**

Southern District
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March 27, 2022

Honorable Lewis J. Liman
United States District Judge
Southern District of New York
500 Pearl Street
New York, New York 10007

**Re: United States v. Lawrence Ray
20 Cr. 110 (LJL)**

Dear Judge Liman:

We are writing on two topics related to cell phone and historical cell site data testimony.¹

The Court should take judicial notice of the relationship between Coordinated Universal Time and Eastern Standard Time

We request that the Court take judicial notice of the relationship between coordinated universal time (UTC) and Eastern Standard Time (EST). UTC is four hours ahead of EST during daylight savings time, and five hours ahead otherwise. Daylight savings time ends on the first Sunday of November each year. 15 U.S.C.A. § 260a (“During the period commencing at 2 o'clock antemeridian on the second Sunday of March of each year and ending at 2 o'clock antemeridian on the first Sunday of November of each year, the standard time of each zone ...shall be advanced one hour.”). Therefore, on October 15-16, 2018, times listed on GX 202 in UTC are four hours ahead of the local time in New York City, which is on Eastern Daylight Savings Time in October.

The district court may “judicially notice a fact that is not subject to reasonable dispute because it (1) is generally known within the trial court’s territorial jurisdiction; or (2) can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned.” Fed. R. Evid. 201. The relationship between UTC and EST is an appropriate topic for the court to recognize under its authority to take judicial notice. *United States v. Michael*, 664 F. App’x 32, 36 (2d Cir. 2016) (finding that district court did not abuse its discretion of taken

¹ At the defense request, the Court set aside time at 8:45 tomorrow morning for the defense to make a record regarding Mr. Petersohn’s testimony. While the defense will, of course, be ready to answer any questions the Court has, we are submitting this letter in the interest of efficiency and to hopefully preserve the time of the Court and the parties for the presentation in front of the jury.

judicial notice of the “relationship between UTC and Eastern Time”). In *Michael*, the district court told the jury that, “Coordinated Universal Time, abbreviated as UTC, is the primary time standard by which the world regulates clocks and time. Local time on the east coast of the United States is five hours behind UTC during winter but four hours behind while daylight savings is observed.” 664 F. App’x at 36.

Thus, the Court should take judicial notice of the fact that on October 15 and 16, 2018, the UTC listed in GX 202 was four hours ahead of local time. This topic is “not subject to reasonable dispute.”

The Court should strike GX 14010, the 97-page map exhibit, which includes maps that are mis-mapped and misleading.

The government introduced a 97-page exhibit including about 90 pages of maps created by Mr. Petersohn. The defense found numerous errors in those maps: call times that were listed incorrectly; calls listed that did not appear in the corresponding records; incorrect locations plotted; and misleading information. The defense should have been allowed to question the expert about those errors on cross-examination. Instead, the Court stopped the defense from doing so, by stating that discussion of the first call time error was “cumulative” and stating that the defense needed to call its own witness to show errors in the map’s locations. *See* T. 123 (The first time the defense asked about Mr. Ray’s calls being listed at the wrong time on the map, the government objected and the court sustained the objection, telling the defense to “move on” and that the information was “cumulative”); T. 128 (“move on because you are trying, I think, both the patience of the jury and the Court in trying to disprove something that is not being asserted”); T. 130 (“If you’ve got a witness who can put in that exhibit, then you can put in the exhibit or the contents of it, but you can’t ask this witness those questions.”). Not being permitted to ask the witness questions to reveal his own mapping errors improperly curtailed the defense’s cross examination and allowed inaccurate maps to be introduced into evidence. The defense requests that the Court strike the maps. In the alternative, the defense renews its request to call a rebuttal cell site expert to testify about these mapping errors.

Below is an offer of proof of what the defense intended to show on cross-examination.

- The calls from Mr. Ray’s device have the wrong times on the maps. For example:
 - o Map 71: The map lists that Mr. Ray’s phone made a call at 6:42:16. It did not.
 - o Map 79: The map lists that Mr. Ray’s phone made a call at 7:20:36. It did not.
 - o May 97: The map lists that Mr. Ray’s phone made a call at 8:03:22 and at 11:53:47. It did not.²
- Map 97 states that Mr. Ray’s device called Ms. Pollok’s device at 7:46:05 on Nov. 22, 2018. That call does not appear in Mr. Ray’s call detail record at all. An excerpt

² Due to the volume of maps, the defense was unable to independently verify each call and location. However, every call that the defense looked at from Mr. Ray’s device had a different time than the time noted in his call detail record, GX 224.

of GX 224, the exhibit listing all of the calls from Mr. Ray's device on 11/22/2018 is included here:

2018/11/22 02:35:03(GMT +0)
2018/11/22 02:35:03(GMT +0)
2018/11/22 00:09:44(GMT -5)
2018/11/22 10:27:26(GMT -5)
2018/11/22 16:55:12(GMT +0)
2018/11/22 16:55:12(GMT +0)
2018/11/22 19:49:44(GMT +0)
2018/11/22 19:49:44(GMT +0)
2018/11/23 00:18:53(GMT +0)
2018/11/23 00:18:53(GMT +0)
2018/11/22 20:01:24(GMT -5)
2018/11/23 01:54:09(GMT +0)
2018/11/23 01:54:09(GMT +0)
2018/11/22 23:51:02(GMT -5)

GMT time in November is 5 hours ahead of local time. The call listed on the map from 7:46:05 should appear on GX 224 as either "19:46:05 GMT -5" or "0:46:05 GMT +0" on 11/23/2018. This call simply isn't there at all.

- The witness incorrectly stated that slide 8 showed a "DAS" record. This tower is not a DAS tower. Tower 116753 is an EDNB-LTE tower. *See* attached, marked for identification as DX P4 (page one shows examples of DAS towers, p. 2 shows that the tower listed on GX 1410, slide 8 was not a DAS tower).
- Incorrect locations mapped: Map 53, May 4, 2018: the call detail record states that Ms. Pollok's device connected at 40.7681866 -73.982534, which is Columbus Circle. *See* attached, marked for identification as DX P7. The Court can verify this with a simple internet search by putting the coordinates into a search bar along with the word map: "40.7681866 -73.982534 map":



Map for 40.7681866 -73.982534 map

Mr. Petersohn's map, however, placed Ms. Pollok's device two blocks south. Thus, it used an incorrect location for Ms. Pollok's call that day.

- Misleading maps:
 - o Map 79 incorrectly suggests Ms. Drury and Mr. Ray's devices are close together only by omitting the data points showing Mr. Ray's device moving from East 65th street, by Grand Central, and into New Jersey. *See* attached map marked for identification as DX P1.
 - o Map 81 suggests that Ms. Drury's and Ms. Pollok's devices are near the White Castle at the same time. They are not. *See* attached map marked for identification as DX P2.

The Court can and should rely on google maps as reliable and accurate. This too is a topic for which judicial notice is appropriate. The location of latitude and longitude coordinates can not reasonably be disputed. *Rindfleisch v. Gentiva Health Sys., Inc.*, 752 F. Supp. 2d 246, 259 n.13 (E.D.N.Y. 2010) ("Courts commonly use [I]nternet mapping tools to take judicial notice of distance and geography."); *Kemp v. Zavaras*, No. 09-cv-00295-WYD-MJW, 2010 WL 1268094, at *2 n.3 (D. Colo. Mar. 29, 2010) (taking judicial notice of driving distance between "two points located in the record using mapping services, such as Google Maps (<http://maps.google.com/>), whose accuracy cannot reasonably be questioned"); *United States v. Brown*, 636 F. Supp. 2d 1116, 1124 n.1 (D. Nev. 2009) ("Courts have generally taken judicial notice of facts gleaned from [I]nternet mapping tools such as Google Maps or Mapquest."). *See also McCormack v. Hiedeman*, 694 F.3d 1004, 1008 n.1 (9th Cir. 2012) (relying on judicial notice of Google Maps information that "[i]t is about 138 miles from Bannock County, Idaho to Salt Lake City, Utah");

United States v. Harmon, 871 F. Supp. 2d 1125, 1160 (D.N.M. 2012) (relying on Google Maps to take judicial notice that “[t]he distance between San Francisco and Albuquerque is approximately 1,086 miles traveling on Interstate Highway 40”); *Hooper v. Clark*, No. CIV S-08-1773-TJB, 2011 WL 445510, at *9 (E.D. Cal. Feb. 8, 2011) (evaluating tactical choice of counsel in part by determining, through Google Maps, that the witness’s testimony would have placed the defendant close to a burglary scene--a precise distance of “approximately 0.4 miles... or an eight minute walk”).

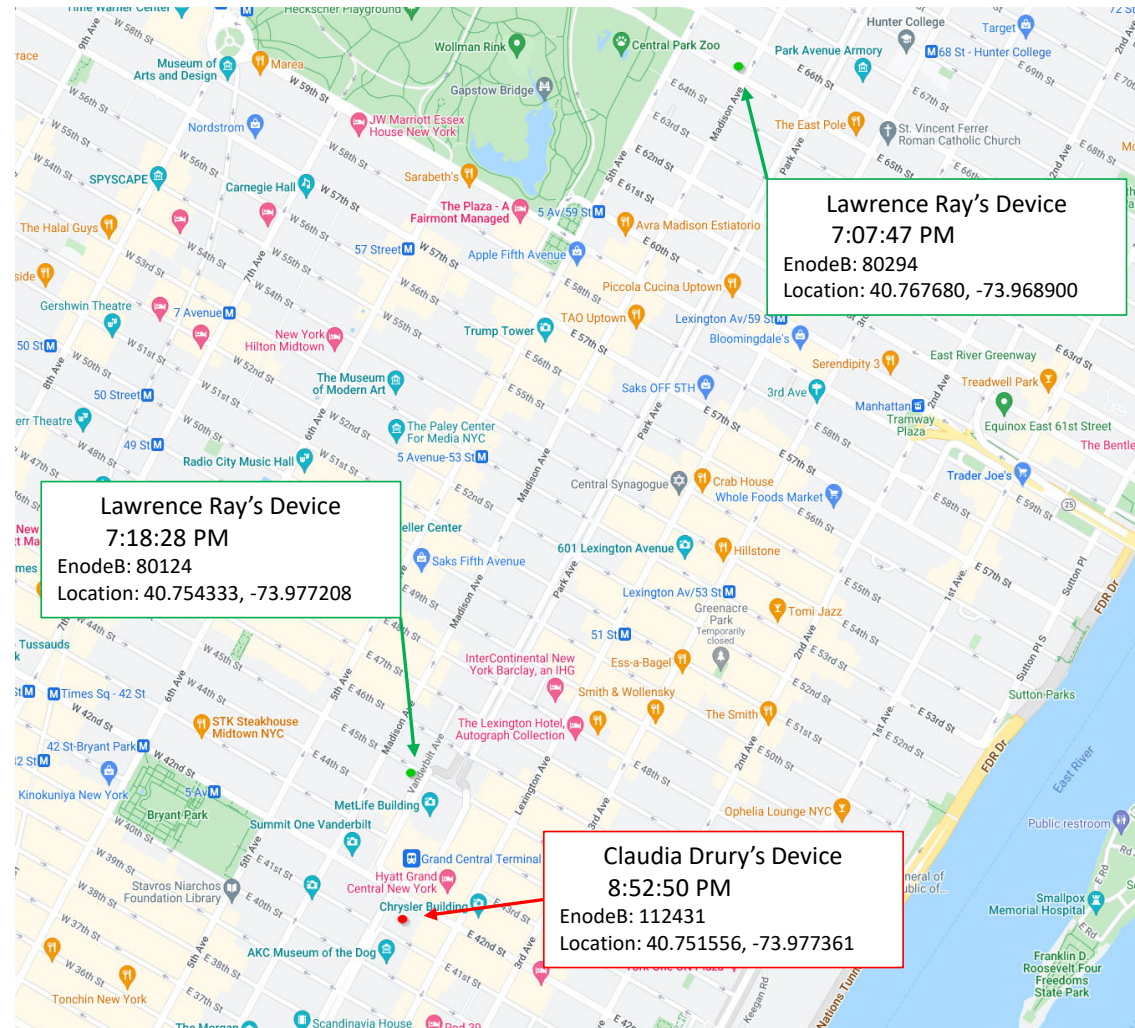
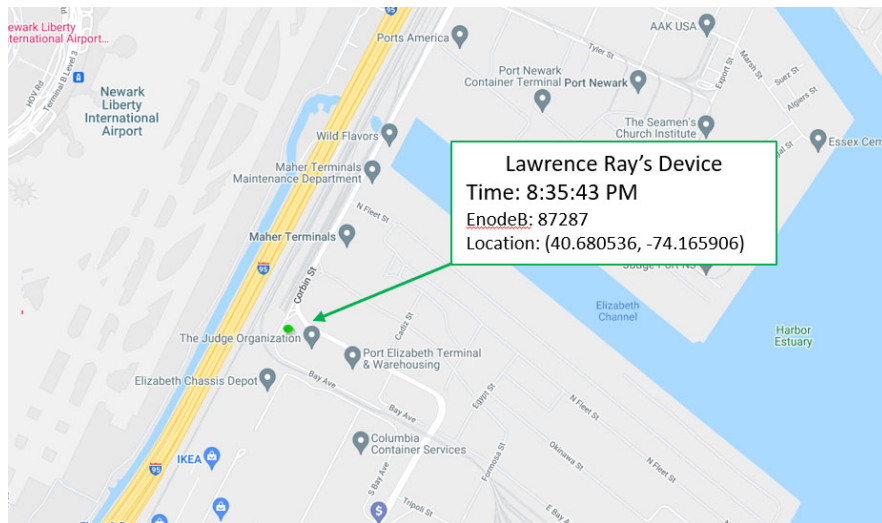
The defense intended to show the jury these errors and misleading omissions as illustrative examples of why the maps should generally not be trusted. That it could not do so improperly curtailed cross-examination. The defense anticipates that the government will use some of Mr. Petersohn’s maps in summation. The Court should prohibit it from doing so, by striking the maps.

Respectfully submitted,

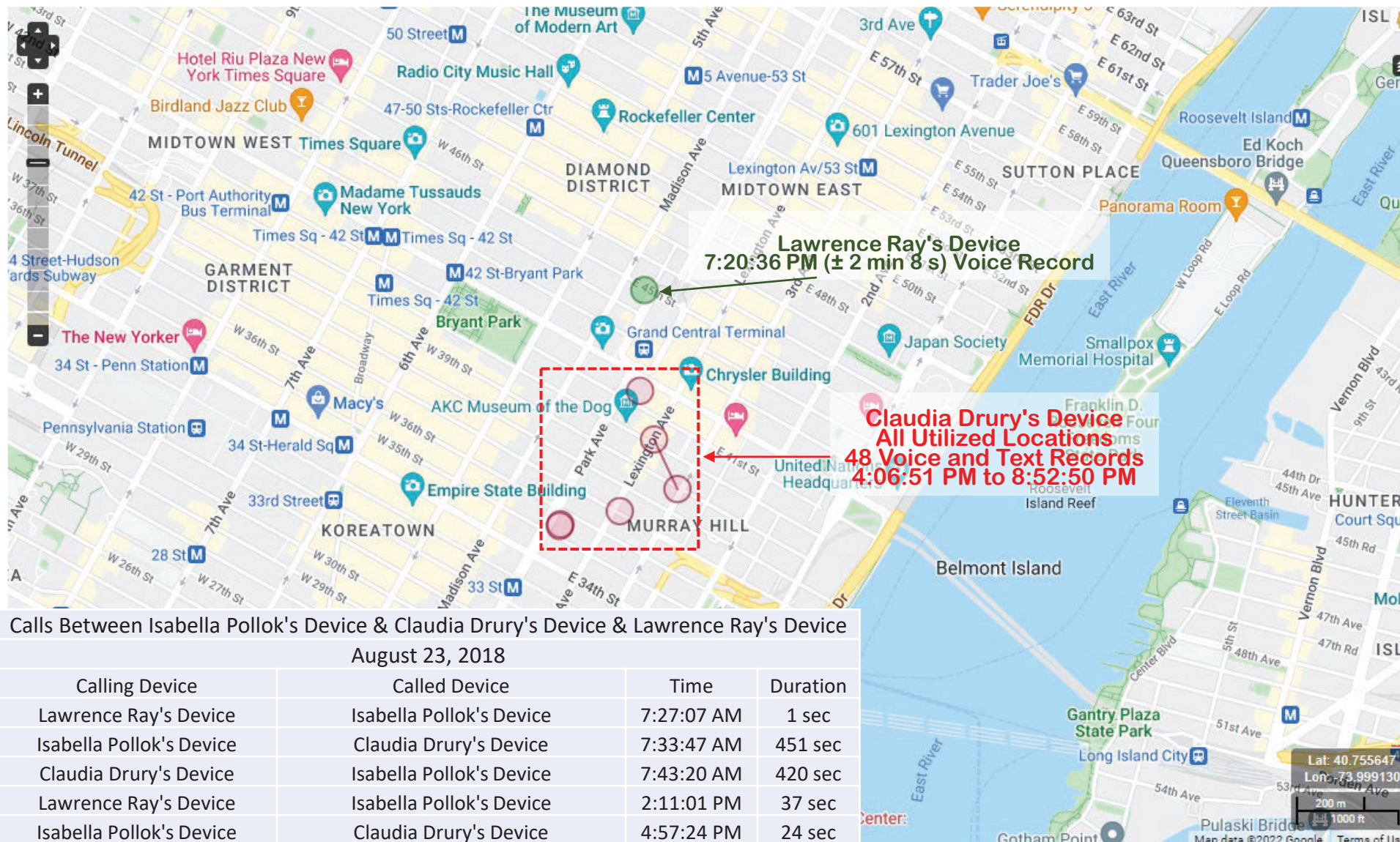
/s/

Marne L. Lenox
Peggy Cross-Goldenberg
Allegra Glashausser
Neil P. Kelly

Locations used by Lawrence Ray's and Claudia Drury's Devices August 23, 2018



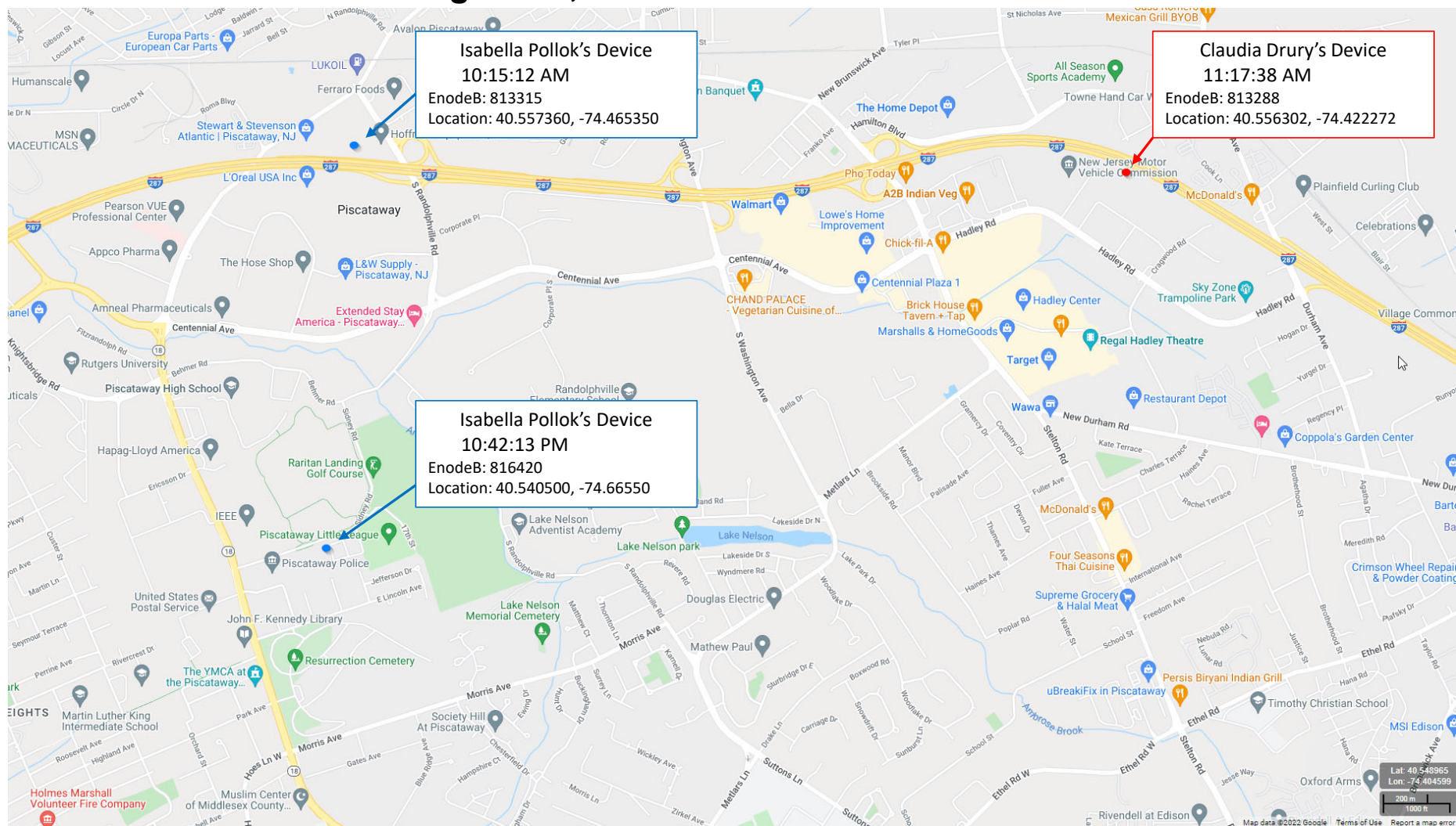
Verizon Cell Site Locations utilized by Lawrence Ray's Device (green) AT&T Cell Site Locations utilized by Claudia Drury's Device (red) August 23, 2018



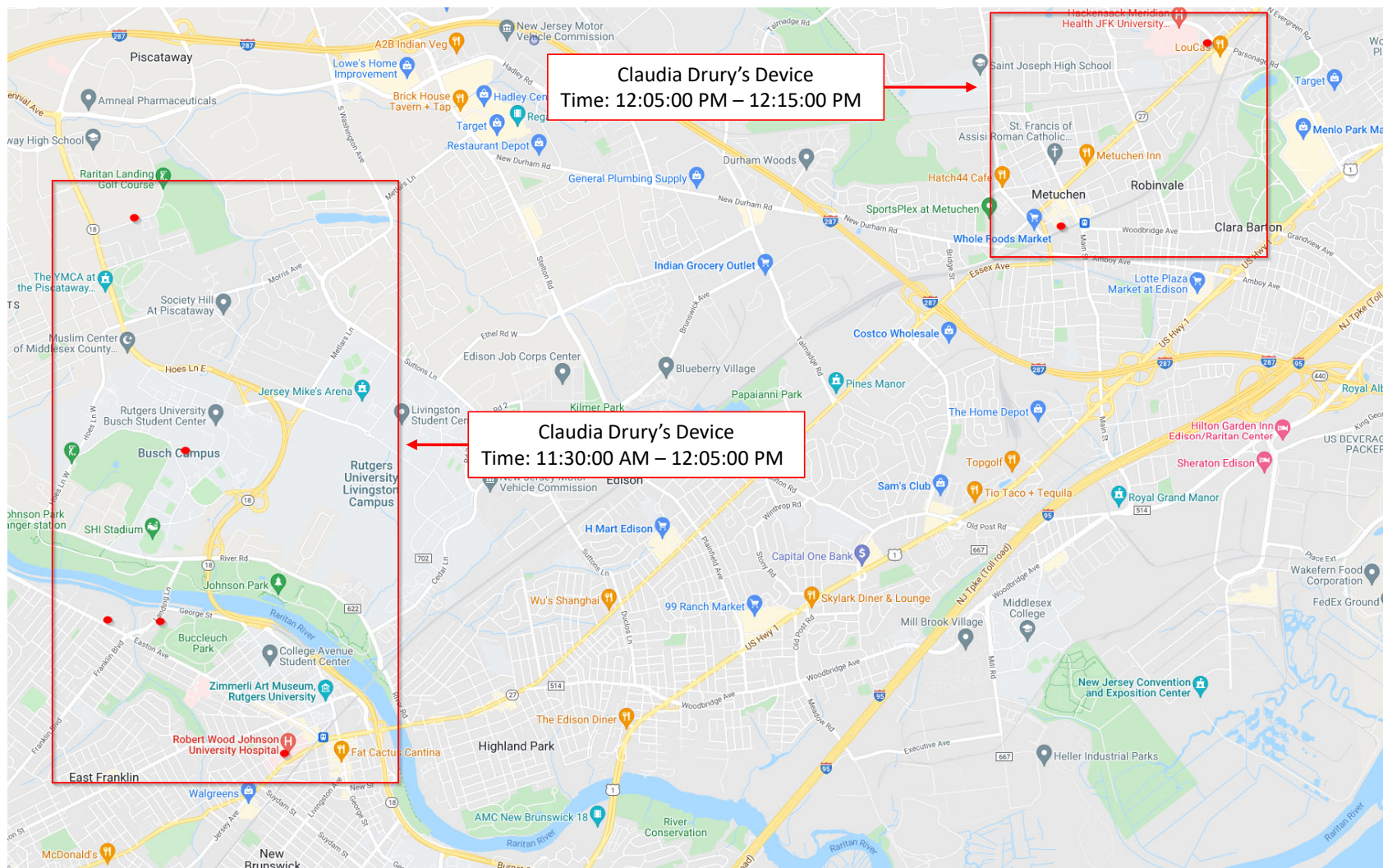
Calls Between Isabella Pollok's Device & Claudia Drury's Device & Lawrence Ray's Device

August 23, 2018

Calling Device	Called Device	Time	Duration
Lawrence Ray's Device	Isabella Pollok's Device	7:27:07 AM	1 sec
Isabella Pollok's Device	Claudia Drury's Device	7:33:47 AM	451 sec
Claudia Drury's Device	Isabella Pollok's Device	7:43:20 AM	420 sec
Lawrence Ray's Device	Isabella Pollok's Device	2:11:01 PM	37 sec
Isabella Pollok's Device	Claudia Drury's Device	4:57:24 PM	24 sec
Claudia Drury's Device	Isabella Pollok's Device	4:59:43 PM	19 sec
Isabella Pollok's Device	Claudia Drury's Device	5:03:18 PM	0 sec



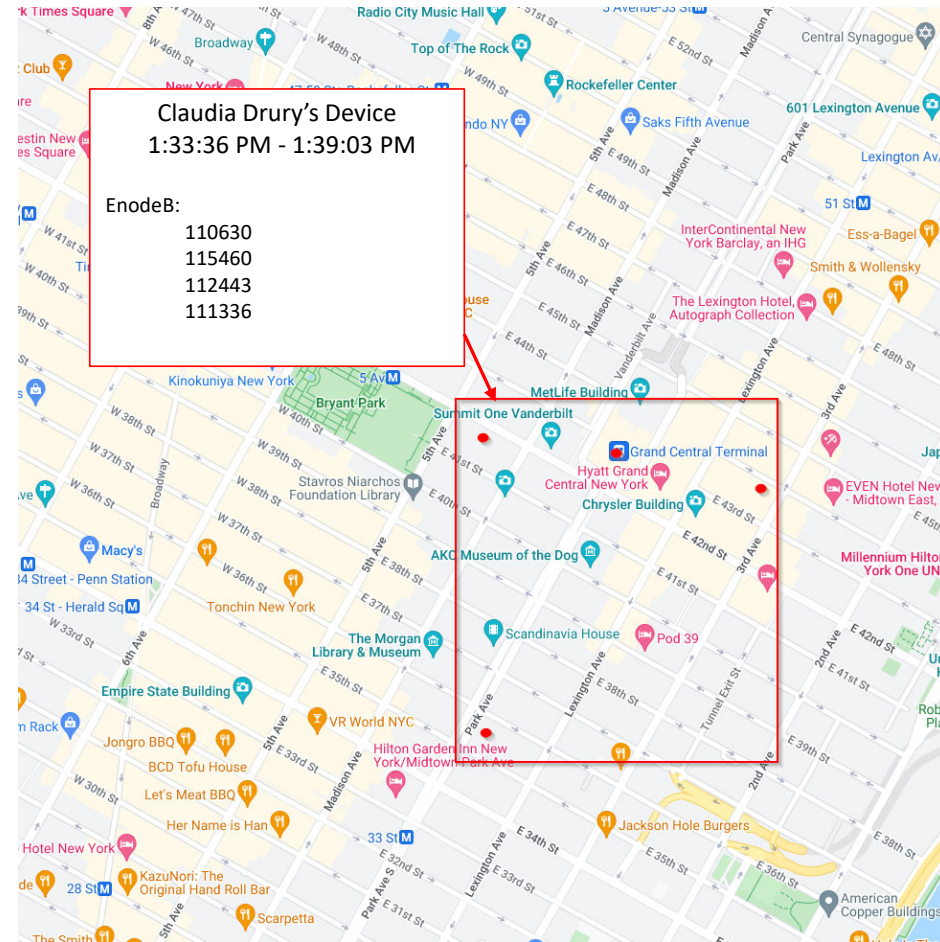
Locations used by Claudia Drury's Device August 27, 2018 – 11:30 AM – 12:15 PM



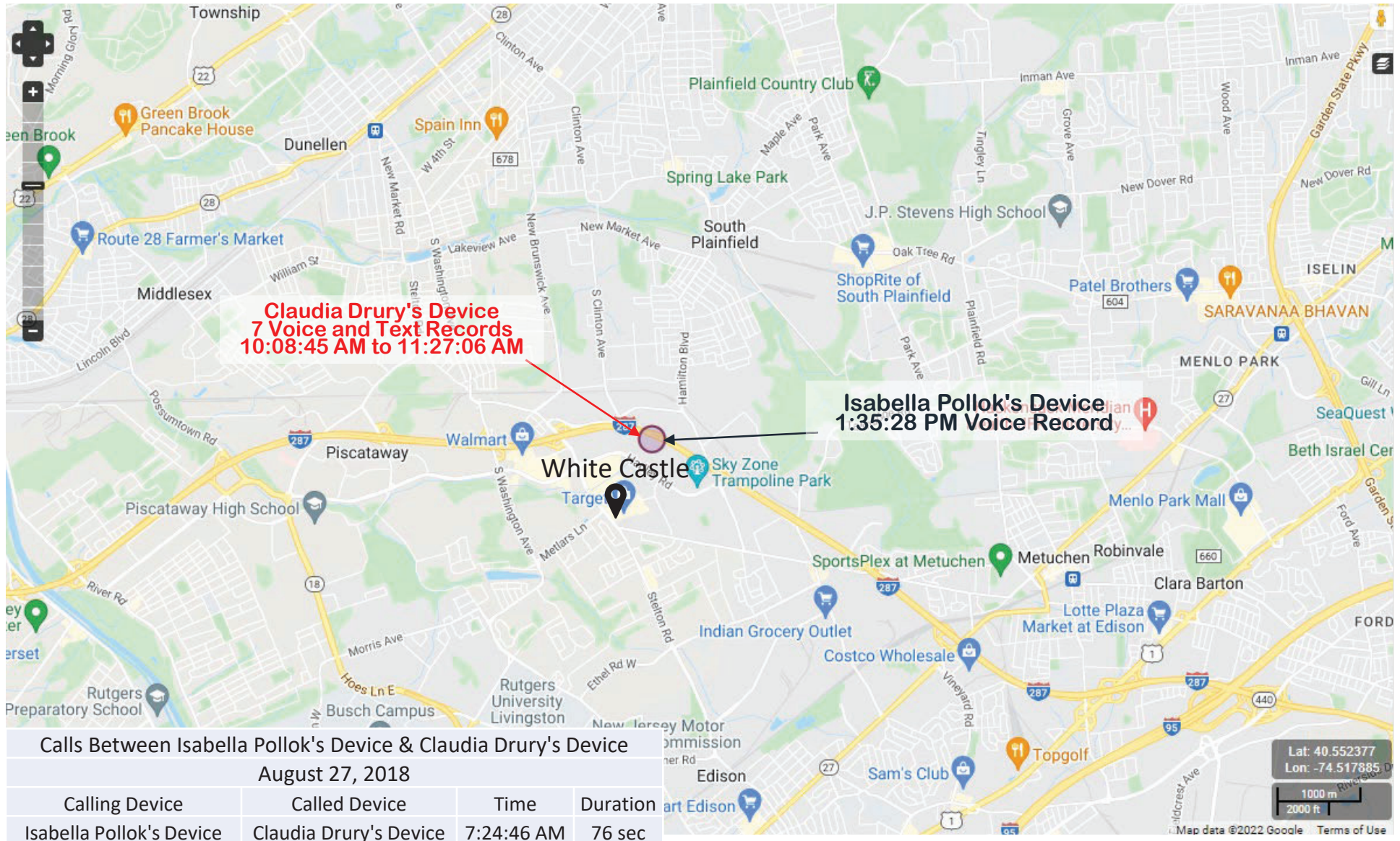
Locations used by Isabella Pollok's and Claudia Drury's Devices August 27, 2018 – 1:30 PM – 1:40 PM

Isabella Pollok's Device
1:35:28 PM

EnodeB: 813288
Location: 40.556302, -74.422272



AT&T Cell Site Locations utilized by Isabella Pollok's Device (blue)
AT&T Cell Site Locations utilized by Claudia Drury's Device (red)
August 27, 2018



AT&T Tower Lists – March 2018
Examples
Site Type: OUTDOOR DAS (ODAS) / INDOOR DAS (IDAS)

USID	Site Type	Site Name	Location-Building Permit Address1	Location-Building Permit City	Latitude	Longitude	eNB-ID	ATT Site Id	Build Type
168651	OUTDOOR DAS (ODAS)	NYPD ONE POLICE PLAZA - NYC BTS ISE ODAS	1 POLICE PLAZA DUP1	NEW YORK	40.712204	-74.001676	115626	321L5626	WIFI/DAS
45223	INDOOR DAS (IDAS)	GOLDMAN SACHS DAS ISE	30 HUDSON STREET	JERSEY CITY	40.7122964	-74.0345972	811618	321L01618	WIFI/DAS
125484	INDOOR DAS (IDAS)	MADISON SQUARE GARDEN DAS	4 PENN PLAZA	NEW YORK	40.7503528	-73.9933722	110193	321L0193	WIFI/DAS
168924	INDOOR DAS (IDAS)	NYC SUBWAY DOWNTOWN HUB	375 PEARL STREET	NEW YORK	40.71103	-74.00086	112322	321L02322	WIFI/DAS
110451	OUTDOOR DAS (ODAS)	GIANTS STADIUM RELO	50 STATE ROUTE 120 DUP 4	EAST RUTHERFORD	40.8136694	-74.0743806		321W34581	WIFI/DAS

AT&T Tower Lists – March 2018
eNB-ID: 116753
Site Type: EDNB-LTE

USID	Site Type	Site Name	Location-Building Permit Address1	Location-Building Permit City	Latitude	Longitude	eNB-ID	ATT Site Id	Build Type
172521	EDNB-LTE	CRAN_RNYJ_00002_HUB	811 10TH AVENUE_DUP1 TEST	NEW YORK	40.7671575	-73.9911342	116753	321L6753	BBU

Sample AT&T Call Record for DAS

MOBILITY
(with cell location)



2777139
07/27/2019

AT&T has queried for records from 01/01/2017 12:00:00am to 07/26/2019 11:59:59pm
AT&T has queried for records using Eastern Time Zone. AT&T's records are stored and provided in UTC.

Run Date: 07/27/2019
Run Time: 03:15:31
Voice Usage For: (732)943-6344

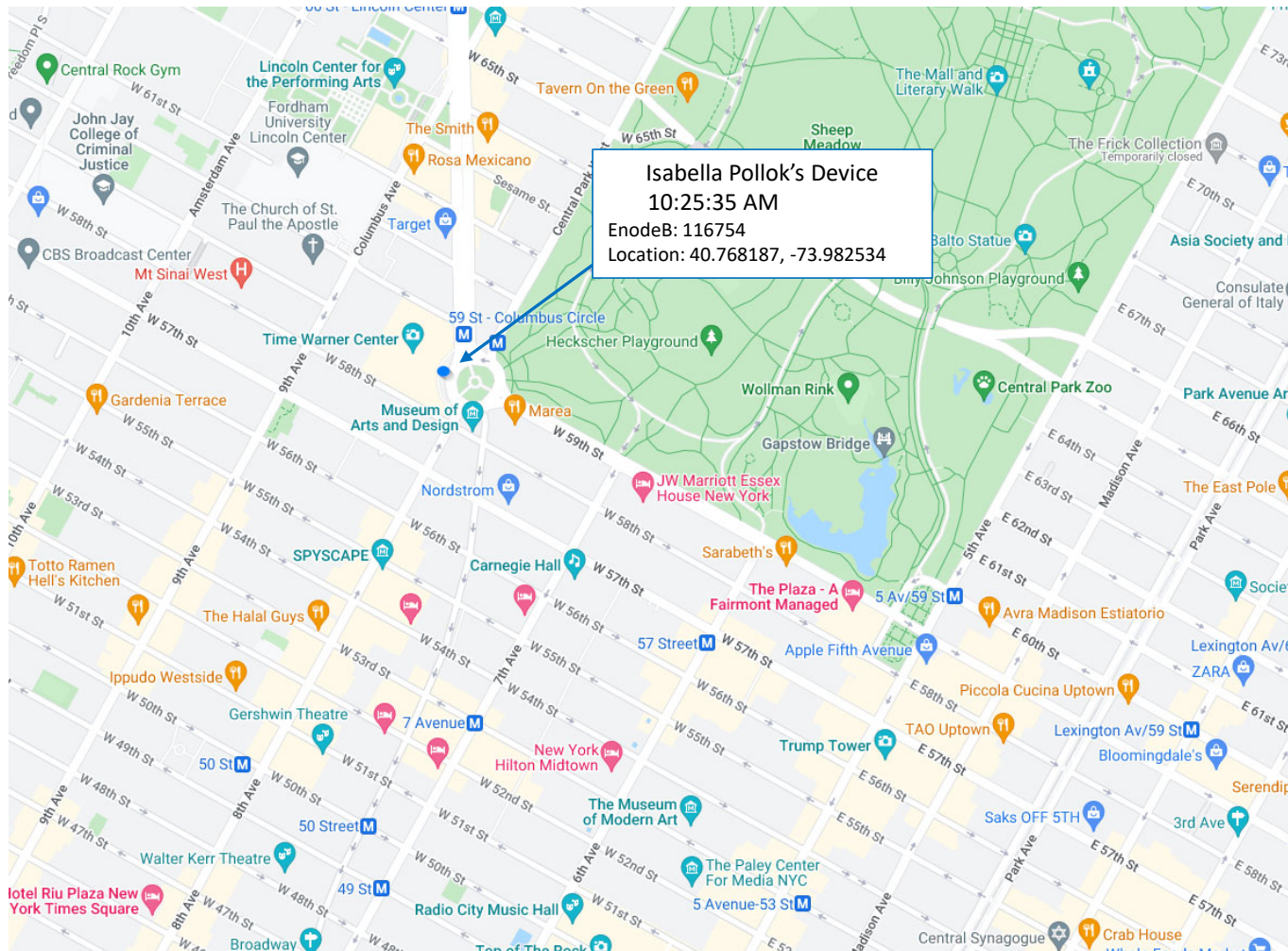
Item	Conn. Date	Conn. Time (UTC)	Seizure Time	ET	Originating Number	Terminating Number	IMEI	IMSI	CT	Feature	Cell Location
119 84	01/30/18	18:56:34	0:04	0:51	17329436344	18884903836	3530500936662207 APPLE IPHONEX (A1865)	310410914450623	MO	[VCORR]	[028784021;112437;-73.98025;40.7645833;-1.0]
119 85	01/30/18	18:58:25	0:04	0:45	17329436344	19175669122	3530500936662207 APPLE IPHONEX (A1865)	310410914450623	MO	[VCORR]	[029888611;116752;-73.9816777;40.7667457;-1.0]
119 86	01/30/18	19:06:51	0:17	0:28	17329436344	17329009540	3530500936662207 APPLE IPHONEX (A1865)	310410914450623	MO	[VCORR]	[029888575;116752;-73.9816777;40.7667457;-1.0, 029888831;116753;-73.9835205;40.7656467;-1.0]
119 87	01/30/18	19:08:15	0:23	0:00	17329436344	17322213026			MT	[Wi-Fi;NIOP]	
119 88	01/30/18	19:08:16	0:24	0:03	17329436344 12152009026 (P)	17322213026			MT	[Wi-Fi;NIOP;CPNA;V M]	
119 89	01/30/18	19:08:16	0:24	0:03	17329436344	17322213026	3530500936662207 APPLE IPHONEX (A1865)	310410914450623	MO	[VCORR]	[029888831;116753;-73.9835205;40.7656467;-1.0]
119 90	01/30/18	19:21:51	0:22	0:00	17329436344	17322213026			MT	[Wi-Fi;NIOP]	
119 91	01/30/18	19:21:52	0:23	0:02	17329436344 12152009026 (P)	17322213026			MT	[Wi-Fi;NIOP;CPNA;V M]	
119 92	01/30/18	19:21:52	0:23	0:02	17329436344	17322213026	3530500936662207 APPLE IPHONEX (A1865)	310410914450623	MO	[VCORR]	[207983766;812436;-73.97703;40.8199;115;-1.0]
119 93	01/30/18	19:44:38	0:22	0:00	17329436344	17322213026			MT	[Wi-Fi;NIOP]	
119 94	01/30/18	19:44:39	0:23	0:04	17329436344 12152009026 (P)	17322213026			MT	[Wi-Fi;NIOP;CPNA;V M]	
119 95	01/30/18	19:44:39	0:23	0:04	17329436344	17322213026	3530500936662207 APPLE IPHONEX (A1865)	310410914450623	MO	[VCORR]	[208147606;813076;-74.06396;40.96483;-1;-1.0]
119 96	01/30/18	19:53:54	0:10	0:34	17329436344	19175669122	3530500936662207 APPLE IPHONEX (A1865)	310410914450623	MO	[VCORR]	[208147606;813076;-74.06396;40.96483;-1;-1.0]
119 97	01/30/18	19:56:20	0:06	14:42	17322213026	17329436344			MO	[Wi-Fi;CMH]	
119 98	01/30/18	19:56:20	0:06	14:42	17322213026	17329436344	3530500936662207 APPLE IPHONEX (A1865)	310410914450623	MT	[NIOP;VCORR]	[208147606;813076;-74.06396;40.96483;-1;-1.0]

AT&T Proprietary

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Isabella Pollok's Device May 4, 2018



AT&T Cell Site Locations utilized by Isabella Pollok's Device (blue)
AT&T Cell Site Locations utilized by Claudia Drury's Device (red)
May 4, 2018

